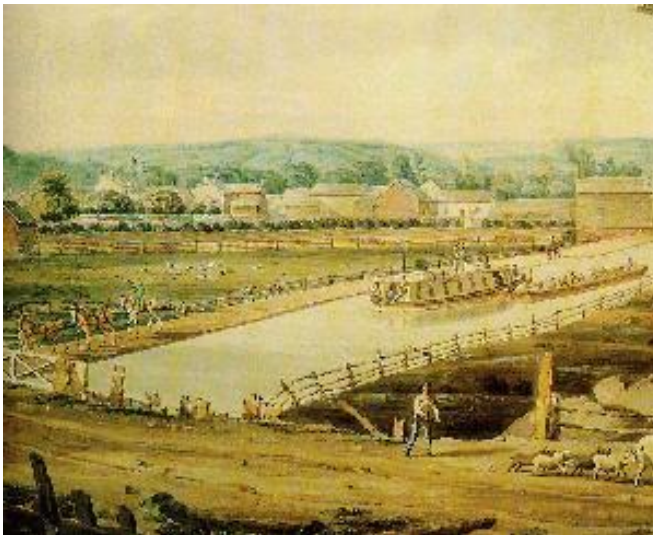


# Industrial Revolution & Internal Improvements



Name: \_\_\_\_\_ Section: \_\_\_\_\_

# **Industrial Revolution & Internal Improvements Vocabulary**

- 1. Industrial Revolution**
- 2. Spinning Jenny**
- 3. Capital**
- 4. Capitalist**
- 5. Factory System**
- 6. Interchangeable Parts**
- 7. Lowell Girl**
- 8. Urbanization**
- 9. Turnpike**
- 10. Lancaster Road**
- 11. Corduroy Road**
- 12. National Road**
- 13. Clermont**
- 14. Erie Canal**

# **Notes**

# The Industrial Revolution

## I. Industrial Revolution

- a. Gradual process by which...
  - i. Machines replace hand tools
  - ii. New sources of power replaced human/animal power

## II. Background

- a. Began in English textile factories in mid-1700s
  - i. 1764, James Hargraves invented the Spinning Jenny
    - 1. Machine that could spin several threads at once
  - ii. 1780, Edmund Cartwright invented the power loom
    - 1. Loom powered by water that could produce much more thread previous machines

## III. Factory System

- a. Before the industrial revolution most goods were created by hand in homes
- b. Large machines needed to be housed in factories near rivers
- c. Capitalists would provide capital to build factories
  - i. Workers would leave homes to work in factories for daily or weekly wages

#### IV. Industrial Revolution Crosses the Atlantic

- a. England wanted to keep new technology a secret
  - i. Passed laws to stop people from taking plans out of the country
- b. 1789, Samuel Slater memorized factory plans and smuggled them out of England
  - i. Slater sold his plans to a Rhode Island capitalist named Moses Brown
  - ii. 1793, Brown built the first American factory in Pawtucket, RI
  - iii. Eli Whitney improved on the factory system by introducing interchangeable parts
    - 1. All machine made parts would be identical
    - 2. Interchangeable parts allowed broken parts to be fixed cheaply and easy and save time and money
- c. As more factories were built, towns grew around factories
  - i. Called factory towns
  - ii. Example: Lowell Massachusetts
    - 1. Built by Francis Cabot Lowell
    - 2. Young women called “Lowell Girls” would live and work at the factory until they returned home to marry

## V. Effects of the Industrial Revolution

### a. Harsh Working Conditions for Factory Workers

#### i. Long hours

1. 12 hour days, 6 days a week

#### ii. Child Labor

1. Children as young as 7 worked in factories
2. Wages were needed to help support family
3. Most did not see a difference between children working in a factory or on a family farm

### b. Urbanization

- i. Many people left rural farms and moved to cities to work in factories

- ii. Movement of people from farms to cities is called urbanization

#### iii. Hazards of Cities:

#### iv. Attractions of Cities:

### c. Changes in Life Style

- i. Family members had to leave homes to earn a living

- ii. Changes affected the role of women in society

1. Women place in society changed because her wages were needed by the family
2. Having a wife who stayed home became a sign of success

## **Internal Improvements**

### **I. Early Transportation**

- a. Early routes and means of transportation made travel through the United States slow, expensive, dangerous and difficult.
- b. Examples:
  - i. Dirt roads
    - 1. Wagons sank in mud
    - 2. Wagon wheels often broke due to roots and rocks.
    - 3. Obstacles often blocked roads
  - ii. Rivers
    - 1. Traveling upstream was difficult
    - 2. Boats needed to be poled or pulled by hand
- c. Starting around 1790, new inventions and internal improvements made traveling through the country faster, cheaper, safer and more convenient

### **II. New Inventions**

- a. The steam engine revolutionized land and water transportation.
  - i. Steam Boats: Allowed people and goods to be transported up and down stream with much greater speed.

### 1. Clermont

a. Built by Robert Fulton

b. Carried passengers 300 miles in 62 hours.

ii. Railroads: Drastically reduced the time it took to transport people and goods on land.

### III. Improvements to Roads

#### a. Corduroy Roads:

i. Made of logs

ii. Pro: Kept wagons from sinking in mud

iii. Con: Very bumpy/noisy ride

#### b. Turnpikes:

i. Built by private companies who charged for use

ii. Built of large flat stones laid on gravel to help with drainage

iii. First turnpike in Pa!

1. Linked Philadelphia to Lancaster

### IV. Canals

a. Canal: Artificial channel filled with water that allows boats to cross a stretch of land.

b. Built to help western farmers get their crops to eastern markets

#### i. Example:

1. Erie Canal: Links Lake Erie with Hudson River



## V. Results

- a. Internal Improvements and improvements in technology allowed Americans to move people and goods with greater ease, security and at less cost.
  - i. Eastern states became increasingly tied together both economically and culturally
  - ii. As transportation became easier, more American began to move west.

# **Resources**